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M/035/009

FACSIMILE COVER SHEET

DATE: FEB. 26, 1997
 NUMBER OF PAGES INCLUDING THIS COVER SHEET: 5
 TO: STEVE LACKEY
KENNECOTT BARNEYS CANON

 FAX NUMBER: 569-7190
 FROM: TONY GALLEGOS (PHONE 538-5267)
Minerals Reclamation and Development Program



State of Utah
DEPARTMENT OF NATURAL RESOURCES
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Minerals Reclamation and Development Program

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SUBJECT: BARNEYS CANYON MINE M/035/009
- EAST BARNEYS PIT ARGUMENT ^{DRAFT} REVIEW (PAGE #2-5)

REMARKS: HERE IS A ^{DRAFT} COPY OF OUR REVIEW COMMENTS. YOU
MAY HAVE ALREADY ADDRESSED TOM'S (TM) COMMENTS
AND LYNN'S (LK) IN YOUR RECENT RESPONSE. MY DRAFT
COMMENTS ARE FOLLOWED BY (AAG). AS A DISCLAIMER,
SOME OF MY COMMENTS MAY BE RESOLVED BY ME
REVIEWING THE UPDATED 1994 PLAN.

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REVIEW COMMENTS
BARNEYS CANYON MINE AMENDMENT M/035/009
EAST BARNEYS PIT
last revision 2/26/97



R647-4-105 - Maps, Drawings & Photographs

105.1 Topographic base map, boundaries, pre-act disturbance

Please revise the names/labels on Plate 96-3 Barneys Canyon Mine Site Permit Boundary to be consistent with the names used in the Disturbed Area Summary table or revise the table accordingly. (AAG) *SEE RECLA 96-1 MAP*

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.

Please provide a general overview of each of the new activities or new disturbances associated with this proposed amendment. Please describe the reasons for modifying the disturbed area borders to include new areas as shown in this submission. Please describe the proposed changes to the mine operations which are included in this amendment, but are not reflected by the addition of a new disturbed area (the addition of a new process pond is one example). (AAG)

106.3 Estimated acreages disturbed, reclaimed, annually.

Table 3.11-1 Disturbed Area Summary includes several new names under the main disturbance categories which differ from the names used in the previous Table 3.11-1. In addition, acreage totals in this amended version of Table 3.11-1 for the various categories of Pits, Roads, Admin/Process/Shop, Topsoil Storage, Waste Dumps and Leach Pads differ from total acreages in the previous Table 3.11-1. Please explain the correlation between the location name and acreages used in the amended Table 3.11-2 Expansion Disturbance Area and the names and acreages used in the amended Table 3.11-1. **TONY NEEDS TO CONFIRM THIS BY LOOKING AT THE CONSOLIDATED 1994 PLAN VOLUME WHICH HE HASN'T FOUND YET.** (AAG)

The amended Table 3.11-2 uses location names such as Melco Pit Expansion, Melco North Dumps, Melco South Dumps, etc., however, the Operations Section of the text contains no redlined descriptions using these same names. If these locations are part of the expansion and are not previously mentioned in the currently approved plan these features should be described and the text redlined to indicate changes. Please explain why there is no new description of these expansion disturbance areas in the text. (AAG)

The category of Leach Pads in table 3.11-1 totals 212 acres. Page 62 of the submission describes the amount of leach pad area required for the life of the project as 170 acres. Please explain this discrepancy and modify the text as appropriate. (AAG)

106.4 Nature of materials mined, waste and estimated tonnages

Page 70 of this amendment submission identifies the East Barney's Pit waste rock as having a pH of 9.3 and an acid base potential of +12.5 ton/K-ton. How many waste rock samples from the

East Barney's Pit area were analyzed? Were the samples composites? Were Total Metals and EP Toxicity Analysis performed on ore, or waste rock samples from the East Barneys Pit area? (AAG)

R647-4-107 - Operation Practices

107.2 Drainages to minimize damage

The operator is required to submit the details of the diversions surrounding the East Barneys Pit as well as the riprap designs for the outlets of these constructed drainages.(TM)

107.3 Erosion control & sediment control

The operator is required to submit a more detailed description of the berm to be constructed prior to the pit and then reclaimed at the end of mining.(TM)

R647-4-109 - Impact Assessment

109.1 Impacts to surface & groundwater systems

The operator must satisfy any concerns related to water quality from the flooding of the pit following mining. The operator must also verify that they have the appropriate ground water permits from the Division of Water Quality and have addressed all their concerns. No data was presented to demonstrate the water quality following mining.(TM)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

The operator is required to discuss the final pit configuration in relation to final drainage and its impacts on drainage.(TM)

Page 59 of the amendment submission describes the proposed pit wall slopes in the East Barneys Pit as averaging 47 degrees on the north wall and 37-39 degrees on the south wall. Bench face angles are expected to be 64 degrees in bedrock and 45 degrees in alluvium. Please provide this type of information in a highwall variance request in the appropriate variance section of the text. Variances granted for other pit highwalls at the site are not automatically extended to new pits. (AAG)

The East Barneys Pit is proposed to remain as a water impounding structure after final reclamation. The impacts on the surface drainage system during operations are discussed on page 96 of the submission, however, there is no discussion regarding the impacts the pit will have as an impounding structure left after final reclamation. Please describe these impacts. In addition, a new request for a variance to leave this pit as an impounding structure should be included in the variance section. (AAG) *SEE PAGES 93 & 103 OF NEW SUBMISSION*

110.5 Revegetation planting program

The amendment addresses several changes to the current approved reclamation plan. These changes are requested based on data from on-site testplots. Please provide reference to the completed studies to document testplot success in the permit.

The amendment proposed revised seed mixes due in part to recommendations of Utah Division of Wildlife Resources. The Division does not have any problem with the

species proposed, however the seeding rate is excessive. Please consider the following suggestions:

Table 5.6-1 Seed Mixture for Topsoiled areas - reduce rate for yarrow to 0.2 lbs (PLS) per acre, Reduce entire mix by 1/3 if drill seeded.

Table 5.6-2 Seed Mixture for Non-Topsoiled areas - reduce rate for yarrow to 0.2 lbs (PLS) per acre, Reduce entire mix by 1/2 for broadcast seeding methods (including hydroseeding) and by 2/3 for drill seeding methods.

Table 5.6-3 Sulfide Repository Cap Seed Mixture - reduce rate for entire mix by 1/3.

R647-4-111 - Reclamation Practices

111.2 Reclamation of natural channels

The operator must show all designs for reclaimed channels both for the East Barneys project and for the entire project. Maps need to be upgraded to show post mining drainage. This information could be include on Plate III-A, facilities Layout and Operational Surface water Runoff, from the original plan. The other option would be to modify Plate 96-1 and tone down the colors, bold the drainage lines and add some more surface water runoff delineation.(TM)

111.6 All slopes regraded to stable configuration

The Division applauds the efforts made by Kennecott Barneys Canyon to utilize wasterock for backfilling of open pits. The proposed use of waste rock from the East Barneys Pit as backfill for the Barneys Canyon Pit is another commendable effort. (AAG)

111.7 Highwalls stabilized at 45 degrees or less

See pit highwall comments under section R647-4-110 - Reclamation Plan. (AAG)

111.9 Dams & impoundments left self draining & stable

The operator needs to provide an adequate discussion of the fact that the impoundment will be self draining and stable. On page 92, the operator states that the pit will act as a containment and settling pond for any intermittent flow. This statement does not imply that the structure will be self draining.(TM)

R647-4-112 - Variance

The operator needs to request a variance for leaving a pit within the Barney's drainage. (TM)

See variance comments in section R647-4-110.2. (AAG)

R647-4-113 - Surety

The amount of reclamation surety proposed for the amended Barneys Canyon Mine (\$3.64 M) is less than the surety amount currently posted. The reduction in the topsoil depth from 12 inches to 6 inches is the main reason for the significant decrease in the estimated reclamation costs. Please provide an estimate of the costs to reclaim the third process water pond which is included in this amendment. It is

unlikely that the cost for reclamation of this will significantly affect the surety amount to warrant an increase in the \$4.6 M surety currently posted. **THE NEW COST ESTIMATE WILL NEED TO BE CAREFULLY REVIEWED BEFORE THIS COMMENT SECTION CAN BE FINALIZED.**

A reduction in the amount of reclamation surety currently posted will require approval from the Board of Oil, Gas and Mining. Please inform us if you wish to pursue a reduced amount of surety so we may provide you with the appropriate forms and schedule this item for the next available Board Hearing. (AAG)

R647-4-115 - Confidential Information

R647-4-116 - Public Notice & Appeals

jb

cc: